DUAL-AXIS MOTOR CONTROLLER
for driverless transport systems

Powerful Dual-Axis Motor Controller for highly dynamic and precise driving and steering movements in modern AGV systems.

Applications

The Dual-Axis Motor Controller was developed specifically for driverless transport systems and combines the control of two drive axes in a single controller.

This means that wheel and steering drives – in both differential and omnidirectional vehicles – are coordinated directly and synchronously in the controller.

The key advantage is internal synchronization: movements are coordinated directly within the controller, without routing synchronization through a higher-level control system.

The integrated cogging compensation enables smooth and jerk-free running, especially in direct drives with high magnetic forces - even at very low speeds or when stationary.

This leads to noticeably more stable driving behavior, especially when changing direction quickly, cornering precisely and driving dynamic profiles.



Features & Benefits

- **Direct axis synchronization in the controller** → no delays due to external control
- **Noticeably quieter and more stable driving behavior,** especially in curves and during dynamic driving
- **Greater precision in path tracking** for freely navigating and rail-guided vehicles
- **A controller for driving and steering axes** → reduces system effort and interface complexity
- **Less coordination effort in the PLC** → Relieving the burden on vehicle controls
- **Very high control quality** for speed, position and torque
- **Flexible control via CAN or I/O** → easy integration into existing systems
- **Integrated STO safety function** for safe operation in the vehicle
- **High dynamic reserves** during acceleration and load changes
- **Flexible encoder evaluation** for different system architectures
- **Ideal for compact, scalable AGV and AMR platforms**

MTA
innovation is our drive

Technical data

		Dual-Axis Motor Controller
Supply voltage for power section	VDC	48
Supply voltage for control section	VDC	24
Rated current (RMS)	A	20
Starting current (RMS)	A	65 / 86 / 97 *
Ambient temperature	°C	0 … 40
Digital inputs	VDC	24 (10x input)
Digital outputs Ready M1, M2	VDC	24 (2x output)
Digital outputs brake M1, M2	VDC	24 (1x per motor, 1 A)
Analog input	VDC	0 … 10 (optional)
Bus system		CANopen
Brake chopper		1x per motor
Safe Torque Off		1x STO per motor (optional)
Temperature monitoring		PTC, PT1000, I²xt

* 3 different current sensors available

Dimensions

